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Feeling Stressed?

Ways to Improve Your Well-Being

Have you been feeling more stressed than usual? Many people are during these challenging times. The COVID-19 pandemic has many people feeling overwhelmed.

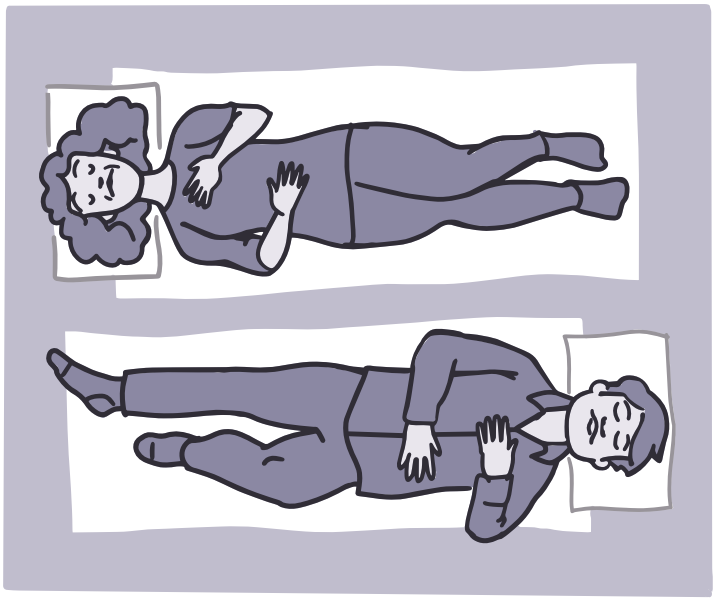
Everyone feels stress sometimes. It's a natural response to a challenge or demand. Stress can come from the day-to-day pressures of work and family.

But stress is much more than just being busy, explains Dr. Janice Kiecolt-Glaser of The Ohio State University, who studies the effects of stress on the body.

"It's the feeling that you're overloaded, out of control, and unable to cope," she says.

Stress can also come from a sudden negative change in your life like a divorce or losing a job. Traumatic events like a major accident, assault, or natural disaster can cause severe stress.

It's important for your health and well-being to learn how to cope with stress. Researchers are working to understand how stress affects health. They're also studying ways to relieve stress. These techniques may help you to feel calmer and more relaxed.



Stress and the Body • Stress isn't always bad. It's actually a survival response. It helps you leap into action in the face of a threat. Your heart rate speeds up, and you breathe faster as you prepare to fight or run to safety.

Short-term stress can even help you perform—you're more able to ace an interview or meet a project deadline. But when stress lasts a long time, it may also harm your health. Your body is constantly acting as if it were in immediate danger.

"There's a really big body of research now that says that chronic stress promotes **inflammation**," says Kiecolt-Glaser.

Inflammation is associated with many diseases, including heart disease, cancer, arthritis, and some mental health conditions.

Stress may also affect your metabolism—the chemical changes in the body that release energy and produce the substances you need to grow, move, and stay healthy.

Kiecolt-Glaser's research shows that stressful events can cause the body to burn fewer calories at rest.

Stress can also cause changes in mood and increase irritability with those around us.

Ways to De-Stress • The first step is to recognize the signs that you're stressed beyond a normal level. Trouble sleeping can be one. Some people get headaches or stomachaches. Stress can also cause changes in appetite that lead you to gain or lose weight.

Once you know you need to reduce stress, there are practical steps you can try. Getting regular exercise can be helpful. Doing an activity you enjoy can also help with stress. This can be anything—from dancing to making art or getting out into nature or having fun with friends.

Making sure to get enough sleep is important, too. "People are more sensitive to stress when they don't have enough sleep," says Kiecolt-Glaser.

Staying socially connected is important, too. Close personal rela-

continued on page 2

Definitions

Inflammation
Heat, swelling, and redness caused by the body's protective response to injury or infection.

continued from page 1

tionships are key to reducing stress. Reaching out to friends and family by phone, video chat, and email can help you stay in touch even when you're not able to see them in person.

"Make a conscious effort to reach out and to maintain contact," says Kiecolt-Glaser. "Loneliness is really destructive."

Eating regular, well-balanced meals and avoiding alcohol and other drugs also help reduce stress.

Mindfulness Approaches • Using mindfulness helps some people cope with stress. It teaches you to focus on being present in the moment. Research shows that simply being aware of what you're doing can improve well-being.

One study showed that people spent nearly half of their waking life not paying attention to what they were doing, says Dr. Richard Davidson of the University of Wisconsin-Madison, an expert on mindfulness.

"And when they were not paying attention to what they're doing, they were significantly less happy."

Davidson's research is shedding light on how mindfulness affects the brain to improve mood. "Regular mindfulness practices can have an impact on specific circuitry in the brain that we know to be important in emotion regulation," he explains.

For those starting to practice mindfulness: One size is not likely to fit all. Davidson recommends starting modestly with three to five minutes, a few times a day. That way you don't get overwhelmed and stop.

There are many mindfulness apps available that teach different techniques.

Just Breathe • The simple act of controlled breathing can bring stress relief.

"It's well known that slow breathing techniques have a positive effect on emotional state," says Dr. Jack Feldman of UCLA, an expert on the neuroscience of breathing.

His research has identified the brain circuits responsible for breathing and sighing. Now he's working to understand how breathing techniques affect the brain to improve mood.

Breathing techniques can be used to help people who are depressed or anxious. Controlled breathing may disrupt the brain circuits involved in depression, he explains.

There are many different breathing techniques you can try. Practicing a few minutes a day can help you get started.

"People who start up a breathing practice may find that it reduces their stress and anxiety considerably," he says.

If you want to try controlled breathing, "belly breathing" is a simple form. Sit or lie down in a comfortable position. Place one hand on your upper chest and the other on your belly. Take a slow, deep breath in through your nose, taking air into your lower belly. The hand on your stomach should rise, while the hand on your chest remains still. Slowly exhale through your mouth.

Wise Choices
Feeling Overwhelmed?

Ways to manage stress:

- **Be observant.** Recognize signs of excessive stress. These include difficulty sleeping, being easily angered or irritable, feeling depressed, and low energy.
- **Exercise regularly.** Just 30 minutes per day of walking can help boost your mood and reduce stress.
- **Schedule regular times for a relaxing activity.** Activities that use mindfulness or breathing exercises, such as meditation, yoga, or tai chi, may help.
- **Get enough sleep.** Adults need about 7 or more hours of sleep per night. School-age children need 9–12 hours, while teenagers need 8–10 hours.
- **Set goals and priorities.** Decide what must get done now and what can wait. Learn to say "no" to new tasks if you start to feel like you're taking on too much.
- **Build a social support network.** Stay connected with people who can provide emotional support.
- **Show compassion for yourself.** Note what you've accomplished at the end of the day, not what you've failed to do.
- **Seek help.** Talk to a health care provider if you feel unable to cope, have suicidal thoughts, or use drugs or alcohol to cope. If you or someone you know is in crisis, call the National Suicide Prevention Lifeline at 1-800-273-TALK (8255). Or text "HOME" to the Crisis Text Line at 741741.

For more tips on relieving stress, see the Wise Choices box. ■

Web Links

For more about stress relief, see "Links" in the online article: newsinhealth.nih.gov/2021/01/feeling-stressed

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Staying Safe From Sepsis

Preventing Infections and Improving Survival

Your immune system is on patrol every day. It protects your body from bacteria, viruses, and other germs. But if something goes wrong, it can also cause big problems.

Sepsis happens when your body's response to an infection spirals out of control. Your body releases molecules into the blood called cytokines to fight the infection. But those molecules then trigger a chain reaction.

"Sepsis is basically a life-threatening infection that leads to organ dysfunction," says Dr. Richard Hotchkiss, who studies sepsis at Washington University in St. Louis.

The most dangerous stage of sepsis is called septic shock. It can cause multiple organs to fail, including the liver, lungs, and kidneys.

Septic shock begins when the body's response to an infection damages blood vessels. When blood vessels are damaged, your blood pressure can drop very low. Without normal blood flow, your body can't get enough oxygen.

Almost 1.7 million people in the U.S. develop sepsis every year. Even with modern treatments, it still kills nearly 270,000 of those. Many recover. But some have lifelong damage to the body and brain.

"We can get many people over that first infection that caused the sepsis," Hotchkiss explains. "But then they're at risk of dying from a second infection because of their weakened condition."

Bacterial infections cause most sepsis cases. But sepsis can also result from other infections, including viral infections, such as COVID-19 or the flu (influenza).

Anyone can get sepsis. But certain people are at higher risk, including infants, children, and older adults.

The early symptoms of sepsis are similar to those of many other conditions. These can include fever, chills, rapid breathing or heart rate, a skin rash, confusion, and disorientation.

It's important to know the symptoms. Sepsis is a medical emergency. If you or your loved one has an infection that's not getting better or is getting worse, get medical care immediately.

Researchers are now looking for better ways to diagnose sepsis. One strategy is to use artificial intelligence to predict a patient's risk of sepsis when they have an infection.

There are few medicines that help treat sepsis. Doctors try to stop the infection and support the functions of vital organs. This usually includes giving oxygen and fluids.

Hotchkiss and other researchers are exploring new treatments for the condition. His team has been testing ways to measure which immune cells are affected by sepsis.

The traditional understanding of sepsis, he says, is that the body responds too strongly to an infection. But his group has found that the body also makes too few of some important types of immune cells. This makes it hard for the body to effectively fight the infection that first triggered sepsis. It can also cause a lot of collateral damage, and make you more vulnerable to other germs.

Hotchkiss's team is now testing ways to boost the immune cells that are vital for fighting infections using drugs. They've found they can increase these cells in patients with sepsis. Next, they will be testing whether this new approach can improve survival.

For now, preventing infections is the best way to avoid sepsis. See the Wise Choices box for tips on staying ahead of sepsis. ■

Wise Choices

Get Ahead of Sepsis

- **Prevent infections.** Take good care of chronic conditions. Get recommended vaccines.
- **Practice good hygiene.** Wash your hands. Keep cuts clean and covered until healed.
- **Know the symptoms.** Symptoms can include any one or combination of these: confusion, disorientation, shortness of breath, rapid heart rate, fever, shivering, chills, extreme pain, and clammy or sweaty skin.
- **Act fast.** Get medical care immediately if you suspect sepsis or have an infection that's not getting better or is getting worse.

Web Links

For more about sepsis, see "Links" in the online article: newsinhealth.nih.gov/2021/01/staying-safe-sepsis

Health Capsules

For links to more information, please visit our website and see these stories online.

Postpartum Depression May Last for Years

Many women develop depression after giving birth. This is called postpartum depression. A new study found that a large number of women had high levels of depressive symptoms at some point in the three years after giving birth.

Researchers asked more than 4,500 women about their symptoms of depression four months and one, two, and three years after birth. These symptoms included anxiety, sadness, difficulty sleeping, and self-blame.

The women fell into four groups. Most had few to no symptoms over the three years. A second group had few to no symptoms four months after giving birth, but these grew worse over time. This was seen in 8% of participants.

Another 13% had moderate symptoms that decreased over time. About 5% of women experienced high levels of depressive symptoms that stayed high for three years.

Women who had a previously diagnosed mood disorder were the most likely to have long-lasting, more severe symptoms. Women who developed diabetes during pregnancy were also at greater risk.

Currently, doctors screen mothers for postpartum depression up to six months after birth. Screening for a longer time may help doctors identify more women who are struggling with the condition.

"Our study indicates that six months may not be long enough to gauge depressive symptoms," says NIH scientist Dr. Diane Putnick, who led the study. "These long-term data are key to improving our understanding of mom's mental health." ■

Problems With Your Smell or Taste?

Smell and taste are important senses. They can help you enjoy life—smell the flowers or savor your meal. They can also keep you safe. The smell of smoke can alert you to danger.

As you get older, your sense of taste or smell may fade. These senses are related. So when you can't smell, you may also find that food tastes bland.

Often, loss of smell or taste isn't cause for concern. It can be caused by many things. People with certain viruses can temporarily lose one or both senses.

When undergoing radiation and other cancer treatments, people may experience loss of smell and taste. This should return after the treatment stops.

Certain medications can also affect smell or make food taste different. An infection in the mouth, like gum disease, can leave a bad taste, too.

Sometimes the loss of smell or taste can be a sign of a more serious problem. Losing your sense of smell, for example, may be a symptom of Parkinson's or Alzheimer's disease. Tell your health care provider if you have any change in your sense of smell or taste.

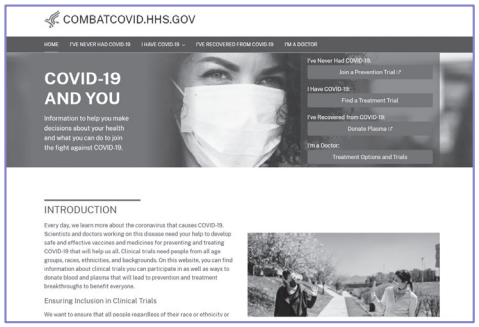
If you're having trouble smelling and tasting, adding colorful foods and spices to a dish can help. Try choosing brightly colored vegetables, like carrots or broccoli. Spices like mustard, garlic, and ginger can liven up a meal. To learn more about changes to smell and taste, visit: www.nia.nih.gov/health/smell-and-taste. ■

Featured Website

Combat COVID

combatcovid.hhs.gov (English) or combatecovid.hhs.gov (Spanish)

We're learning more about the virus that causes COVID-19. But scientists and doctors need your help. Visit this new web portal for information on clinical trials you can participate in. Also, find out how to donate plasma and blood if you've recovered from COVID-19.



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